PATENT COOPERATION TREATY

From the
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To:
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PCT

WRITTEN OPINION

(PCT Rule 66)

Date of Mailing (day/month/year)	**2 2 OCT 2003**

Applicant's or agent's file reference	REPLY DUE
F164222	within 2 months/days from the above date of mailing

International application No.	International filing date (day/month/year)	Priority date (day/month/year)
PCT/IB02/05777	20 December 2002 (20.12.2002)	02 January 2002 (02.01.2002)

International Patent Classification (IPC) or both national classification and IPC

IPC(7): G06F 17/30 and US Cl.: 707/204

Applicant

EXANET LTD.

1. This written opinion is the __first__ (first, etc,) drawn by this International Preliminary Examining Authority.

2. This opinion contains indications relating to the following items:

   I   ☒   Basis of the opinion

   II   ☐   Priority

   III   ☐   Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

   IV   ☐   Lack of unity of invention

   V   ☒   Reasoned statement under Rule 66.2 (a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

   VI   ☐   Certain documents cited

   VII   ☐   Certain defects in the international application

   VIII   ☐   Certain observations on the international application

3. The applicant is hereby **invited to reply** to this opinion.

   When?   See the time limit indicated above. ~~The applicant may, before the expiration of that time limit, request this Authority to grant an extension. See rule 66.2(d).~~

   How?   By submitting a written reply, accompanied, where appropriate, by amendments, according to Rule 66.3. For the form and the language of the amendments, see Rules 66.8 and 66.9.

   Also   For an additional opportunity to submit amendments, see Rule 66.4.
   For the examiner's obligation to consider amendments and/or arguments, see Rule 66.4 *bis*.
   For an informal communication with the examiner, see Rule 66.6

   If no reply is filed, the international preliminary examination report will be established on the basis of this opinion.

4. The final date by which the international preliminary examination report must be established according to Rule 69.2 is: __02 May 2004 (02.05.2004)__ .

Name and mailing address of the IPEA/US	Authorized officer
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Form PCT/IPEA/408 (cover sheet)(July 1998)

WRITTEN OPINION	International application No.
	PCT/IB02/05777

V. Reasoned statement under Rule 66.2(a)(ii) with regard to n velty, inventive step or industrial applicability; citations and explanations supporting such statement

1. STATEMENT

Novelty (N)	Claims	7-9, 44, 50, 71, 86, and 90	YES
	Claims	1-6, 10-43, 45-49, 51-70, 72-85, 87-89, 91-94	NO
Inventive Step (IS)	Claims	7-9, 44, 50, 71, 86, and 90	YES
	Claims	1-6, 10-43, 45-49, 51-70, 72-85, 87-89, 91-94	NO
Industrial Applicability (IA)	Claims	1-94	YES
	Claims	NONE	NO

2. CITATIONS AND EXPLANATIONS
Please See Continuation Sheet

Supplemental Box
(To be used when the space in any of the preceding boxes is not sufficient)

TIME LIMIT:

The time limit set for response to a Written Opinion may not be extended. 37 CFR 1.484(d). Any response received after the expiration of the time limit set in the Written Opinion will not be considered in preparing the International Preliminary Examination Report.

V. 2. Citations and Explanations:

Claims 1-6, 10-43, 45-49, 51-70, 72-85, 87-89, and 91-94 lack novelty under PCT Article 33(2) as being anticipated by Ofek et al. (U.S. patent 6,487,561).

Regarding claim 1, Ofek et al. teaches a computer network backup system comprising:
a).   at least two backup devices (Fig. 11A, element 111 and 112);
b).   at least one file source (Fig. 11A);
c).   a control unit comprising a control program that directs files from said file source to said backup devices, wherein said control program splits files into file segments, thereby equalizing the archival load between said backup devices (col. 4, lines 23-38);
d).   a communications link coupled between said backup devices, said file source and said control unit (Fig. 8).

Regarding claims 2, 28, and 93, Ofek et al. further teaches wherein said backup device a hard disk, an optical disk, a magnetic tape drive or a non-volatile random access memory (Fig. 11A).

Regarding claims 3, 26, 27, 49, 70, 91, and 92, Ofek et al. further teaches wherein said backup devices are geographically distributed (col. 6, lines 1-5).

Regarding claim 4, Ofek et al. further teaches wherein said file source is a storage device, a hard disk, a random access memory, a programmable non-volatile memory, a redundant array of independent disks (RAID), incremental backup data, snapshot data, a file system, a distributed file system or a location independent file system (col. 5, lines 35-43; col. 27, lines 10-21).

Regarding claims 5 and 94, Ofek et al. further teaches wherein said file source is comprised of at least two independent file sources (Fig. 11A).

Regarding claims 10, 19, 30, 38, 51, 59, 65, 72, and 80, Ofek et al. further teaches the steps of:
a).   splits files that exceed said segmentation threshold value into file segments, wherein each of said file segments does not exceed said segmentation threshold value (col. 4, lines 23-38);

b).   sorts files located in said file source and said file segments into a sorted list (col. 38, lines 53-61); and
c).   writes files smaller than said segmentation threshold value and said file segments into said backup devices according to said

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Supplemental Box
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sorted list (col. 38, lines 41-52).

Regarding claims 11, 20, 39, 54, 64, 60, 75, and 81, Ofek et al. further teaches wherein said files and said file segments are sorted in descending order based upon file size (col. 38, lines 53-61).

Regarding claims 12, 21, 40, 55, 61, 76, 82, 85, Ofek et al. further teaches wherein said files and said file segments are sorted in ascending order based upon file size (col. 38, lines 53-61).

Regarding claims 13 and 14, Ofek et al. further teaches wherein said control program receives notification of backup device failure (col. 6, lines 1-5).

Regarding claims 15, 16, 24, 37, 47, 58, 68, 79, and 89, Ofek et al. further teaches wherein said control program writes said files and said file segments to the then least filled-up backup device (col. 6, lines 32-50).

Regarding claims 17, 22, 31, 45, 52, 66, 73, and 87, Ofek et al. further teaches wherein said control program attaches a header to each of said file segments (Fig. 6).

Regarding claims 18, 23, 32, 46, 53, 67, 74, and 88, Ofek et al. further teaches wherein said file segment header comprises at least one of an offset field or a size field (col. 12, line 63 - col. 13, line 11).

Regarding claims 35, 41, 42, 56, 62, 63, 83, and 74, Ofek et al. further teaches herein the method further comprises concurrently writing said files and said file segments to said backup devices (col. 20, lines 19-29).

Regarding claims 36, 43, 57, 64, 78, and 85, Ofek et al. further teaches wherein the method further comprises writing said files and said file segments in accordance with their ordered position in said sorted list (col. 38, lines 53-61).

Regarding claims 25, 48, and 69, Cabrera et al. teaches a method, a computer software product and system for file backup using a parallel backup system comprising at least one file source and at least two backup devices, the method comprising:
a). calculating a segmentation threshold value (col. 6, line 66 - col. 7, line 12); and
b). directing said files from said file source to said backup devices (abstract).

Claims 7-9, 44, 50, 71, 86, and 90, lack an inventive step under PCT Article 33(3) as being obvious over Ofek et al. (U.S. patent 6,487,561) in view of Cabrera et al. (U.S. Patent 5,854,754).

Regarding claim 7, Ofek et al. does not clearly teach wherein the protocol of said communications link is Ethernet, Internet protocol (IP) or asynchronous transfer mode (ATM).

Cabrera et al., however, teaches wherein the protocol of said communications link is Ethernet, Internet protocol (IP) or asynchronous transfer mode (ATM) (col. 12, lines 5-32).

It would have been obvious to provide communications protocol such as Ethernet, IP, or ATM in order to transmit data within a network.

Regarding claims 8, 9, 44, 50, 71, 86, and 90, Ofek et al. does not clearly teach wherein said segmentation threshold value is calculated by summing the sizes of all files in said file source and dividing the result by the number of said backup devices.

Cabrera et al., however, teaches wherein segmentation threshold value is calculated by summing the sizes of all files in said file source and dividing the result by the number of said backup devices (col. 6, line 66 - col. 7, line 12).

It would have been obvious to calculate the segmentation threshold value in order to determine the optimum value of a segment for the backup system the work in a most efficient manner.

US 6,487,561 B1 (OFEK et al) 26 November 2002, see column 4, line 17 - column 41, line 60.

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Creation date: 05-27-2004
Indexing Officer: BBROWN8 - BARBARA BROWN
Team: OIPEBackFileIndexing
Dossier: 10033166

Legal Date: 01-20-2004

No.	Doccode	Number of pages
1	IMIS	1

Total number of pages: 1

Remarks:

Order of re-scan issued on ....